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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/060,121	01/31/2002	Robert P. Benjey	01-ASD-224 (GT)	5887
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200	7590	12/28/2004
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EATON CORPORATION  
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CLEVELAND, OH 44114

EXAMINER
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RIVELL, JOHN A

ART UNIT	PAPER NUMBER
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3753

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/060,121		BENJEY, ROBERT P.	
	<b>Examiner</b>		<b>Art Unit</b>	
	John Rivell		3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/22/04 (RCE).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09282004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 28, 2004 has been entered.

Claims 1-12 remain pending.

Applicant's arguments with respect to claims 1-12 have been considered but are moot in view of the new ground(s) of rejection.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al (U.S. 5,606,954) in view of Aubel et al. further in view of Hashimoto et al.

The patent to Yamazaki et al ('954), in figure 9, discloses "a system for controlling flow of liquid fuel and vapor during refueling of a motor vehicle fuel tank (21) with a filler tube (22') for receiving a fuel dispensing nozzle (3) comprising: (a) a vent valve (26) disposed in the tank (21) and having an inlet communicating with the vapor dome in the tank (21) and an outlet (connected to conduit 23a) communicating with a remote vapor storage device (canister C);... (c) a recirculation conduit (27<sub>3</sub>) having one end connected to admit fuel vapor to the filler tube (at 22a')... and having an end

opposite said one end connected to receive fuel vapor from the outlet of said vent valve (at conduit 23a)" as recited in claim 1.

Thus the patent to Yamazaki et al ('954) discloses all the claimed features with the exception of having "a seal disposed in the filler tube and operable for sealing about the nozzle upon insertion therein" and "a neck portion in the filler tube downstream of the location of said recirculation conduit connection location, wherein said neck has the inner periphery thereof sized to receive the nozzle in closely fitting arrangement and to form an effective dynamic seal about liquid discharging from the nozzle"

Firstly, the patent to Aubel et al. discloses that it is known in the art to employ a seal element 24 in fuel filler neck 24, upstream of a vapor dome vent connection at valve 28 for the purpose of preventing fuel vapor leakage to atmosphere about the filling nozzle while permitting recirculation of fuel vapor from the tank dome area back to the filler neck during refueling.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Yamazaki et al ('954) a seal element about the filling nozzle at a location upstream of the dome vapor vent conduit 27<sub>3</sub> in Yamazaki et al ('954) for the purpose of preventing fuel vapor leakage to atmosphere about the filling nozzle while permitting recirculation of fuel vapor from the tank dome area back to the filler neck during refueling as recognized by Aubel et al.

Secondly, the patent to Hashimoto et al. in figure 4, discloses that it is known in the art to employ "a neck portion in the filler tube (3) downstream of the location of said recirculation conduit (113 or 18) connection location (to the filler neck), wherein said neck (appears to have, as shown in figure 4) the inner periphery thereof sized to receive the nozzle (N) in closely fitting arrangement and to form an effective dynamic seal about liquid discharging from the nozzle" for the purpose of effectively creating a fuel "jetting"

action causing a negative pressure in the region 21 capable of effectively recirculating fuel vapor from either of the vapor vent conduits 13 or 18 back into the filler neck during refueling.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Yamazaki et al ('954) a neck portion in the filler tube 22' downstream of the location of said recirculation conduit 27<sub>3</sub> connection location to the filler neck, wherein said neck has the inner periphery thereof sized to receive the nozzle 3 in closely fitting arrangement and to form an effective dynamic seal about liquid discharging from the nozzle for the purpose of effectively creating a fuel "jetting" action causing a negative pressure in the region of the filler neck at the vapor vent connection location 21 effectively recirculating fuel vapor from the vapor vent conduit 27<sub>3</sub> back into the filler neck at 22a" during refueling as recognized by Hashimoto et al.

Regarding claim 2, in Yamazaki et al ('954) "said recirculation conduit (27<sub>3</sub>) includes a one-way valve" at 62 as recited.

Regarding claim 3, in Yamazaki et al ('954) "said vent valve (26) outlet is connected to a hose (at 23a) connected to said storage device (canister C); and, said recirculation conduit (27<sub>3</sub>) has an end thereof connected to said hose" as recited.

Regarding claim 4, in Yamazaki et al ('954) "said recirculation conduit (27<sub>3</sub>) has one end connected through the wall of the tank and an end opposite said one end connected to said filler tube at said location" as shown in figure 6 for example.

Regarding claim 5, in Yamazaki et al ('954) "said vent valve (26) is float (25) operated" as recited.

Regarding claim 6, in view of the relative dimension apparent in figure 4 of Hashimoto et al. it appears that "said neck portion (at fuel filler neck 3)1 has its inner diameter sized about 1.2 times the nozzle (N) diameter" as recited.

Regarding claims 7-10, in making and/or using the device of the combination above, one of ordinary skill necessarily performs the recited method steps including "(a) disposing a fuel vapor vent valve (26 of Yamazaki et al ('954))... (b) disposing a seal (as at seal 24 in Aubel et al.) in the filler tube for sealing about the dispensing nozzle upon insertion in the filler tube; (c) recirculating fuel vapor to the filler tube (as in Yamazaki et al ('954)) (d) sizing a neck portion" as taught by Hashimoto et al.

Regarding apparatus claims 11 and 12 the comments above concerning the combination of Yamazaki et al ('954), Aubel et al. and Hashimoto et al. apply here as well.

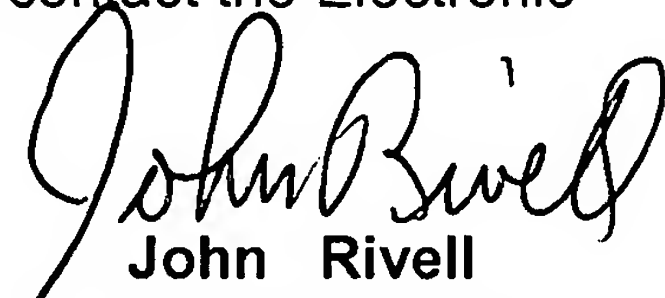
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (571) 272-4918. The examiner can normally be reached on Mon.-Thur. from 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John Rivell  
Primary Examiner  
Art Unit 3753

j.r.